

Mineral Industry Surveys

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COPPER IN JULY 2005

Average daily mine production of copper fell by about 10% in July from that in June, according to data compiled by the U.S. Geological Survey (USGS). ASARCO Incorporated's mines in Arizona, where workers began a strike on July 2 (See Copper in June 2005.) accounted for the large decline. Production for the first 7 months of 2005, however, remained about 8% above that for the first 7 months of 2004. While the USGS had previously anticipated that annual mine production for 2005 would rise to about 1. 3 million metric tons (Mt), production is now projected to be about 1.14 Mt and is expected to be slightly lower than that in 2004. In addition to the Asarco strike, unusually heavy rains in parts of Arizona in the first one-half of the year and equipment shortages reduced output. Downstream, average daily smelter production fell by 11%, and average daily refinery production remained essentially unchanged from the depressed level in June. Production of refined copper for the first 7 months of 2005 was about 2% below that for the same period of 2004.

Domestic consumption of refined copper for the first 7 months of 2005 declined by about 120,000 metric tons (t) (9%) from that of the equivalent period of 2004. Despite the decline in consumption, there was a significant shift toward dependence on imported copper for meeting domestic demand. Net imports of refined copper for the first 6 months of 2005 rose to 439,000 t from 268,000 t for the first 6 months of 2004. In the first 6 months of 2004, domestic production and imports of refined copper had been supplemented by a 412,000 t drawdown in domestic inventories. In the first 6 months of 2005, nearly depleted inventories fell by only 36,000 t.

According to the preliminary data compiled by the International Copper Study Group (ICSG) (2005), the market balance for refined copper for the first half of 2005, including revisions to data previously presented, indicated a production deficit of about 219,000 t. This compares with a production deficit of 790,000 t for the same period in 2004. The

combination of lower world consumption, which fell by 2.1% in the first half of 2005 compared with that of the equivalent period of 2004, and total world refined production, which increased by 5.1% over the same period, led to the reduced production deficit. World mine production in the first 6 months of 2005 increased by 4.5% compared with that in the first half of 2004. Production in the first 6 months of 2004, however, was unusually low owing to production disruptions. When comparing the first half of 2005 with the second half of 2004, total mine production decreased by 5.5%.

Update:

Copper prices continued to trend upward, with the COMEX spot prices achieving new record—high average monthly levels in August and September of \$1.72 and \$1.75 per pound of copper, respectively. Stocks of refined copper at the major world metal exchanges at the end of August totaled 119,000 t, an increase of 43,000 t from those held at end of July, but were down by 5,000 t from those held at the end of 2004 and by almost 700,000 t from those at yearend 2003.

As of the end of September, Asarco and the United Steel Workers Union had failed to reach an agreement, and workers remained on strike. Asarco reportedly refused to agree to a provision in the Union's most recent offer that would require any potential buyer of Asarco's operations to recognize the union and negotiate new labor agreements as part of the sale. Asarco reportedly believed that any such successorship clause would devalue the company assets (Barry, 2005).

References Cited

Barry, Sean, 2005, Asarco, union halt talks as row over successorship continues: American Metal Market, v. 113, no. 37-5, September 23, p. 6. International Copper Study Group, 2005, Copper—Preliminary data for the 1st half of 2005: Lisbon, Portugal, International Copper Study Group press release, September 9, 1 p.

 $\label{table 1} \textbf{TABLE 1}$ SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1

(Metric tons, unless otherwise specified)

| | | | | 2005 | |
|--|--------------------|-------------------|----------------------|---------|-----------|
| | Source | • | | | January - |
| | table ² | 2004 ^p | June | July | July |
| Production: | | | | | |
| Primary: | | | | | |
| Mine, recoverable | (2) | 1,160,000 | 97,700 ^r | 90,400 | 688,000 |
| Refinery: | | | | | |
| Electrolytic: | | | | | |
| Domestic and foreign | (4) | 671,000 | 49,100 ^r | 54,600 | 378,000 |
| Electrowon | (4) | 584,000 | 48,100 ^r | 46,600 | 322,000 |
| Total | (4) | 1,260,000 | 97,200 | 101,000 | 699,000 |
| Secondary recoverable copper: | | | | | |
| Refineries | (5) | 50,800 | 3,620 | 3,940 | 28,400 |
| Ingot makers ³ | (5) | 91,800 | 7,650 | 7,650 | 53,600 |
| Brass and wire-rod mills | (5) | 705,000 | 56,900 ^r | 54,600 | 403,000 |
| Foundries, etc. ³ | (5) | 65,200 | 5,430 | 5,430 | 38,000 |
| Smelter, total | (3) | 542,000 | 44,100 | 40,300 | 288,000 |
| Consumption: | | | | | |
| Apparent | (8) | 2,570,000 | 185,000 | NA | NA |
| Refined (reported) | (7) | 2,410,000 | 192,000 ^r | 193,000 | 1,310,000 |
| Purchased copper-base scrap | (9) | 1,150,000 | 94,700 ^r | 90,300 | 664,000 |
| Stocks at end of period: | | | | | |
| Total refined | (11) | 136,000 | 100,000 r | 91,700 | XX |
| Blister, etc. | (11) | 51,400 | 45,200 ^r | 36,000 | XX |
| Prices: | | | | | |
| U.S. producer cathode (cents per pound) ⁴ | (12) | 133.938 | 167.452 | 168.484 | 157.130 |
| Imports: ⁵ | | | | | |
| Ores and concentrates ⁶ | (14) | 22,900 | 2 | NA | NA |
| Refined | (14) | 807,000 | 64,700 | NA | NA |
| Exports: ⁵ | | | | | |
| Ores and concentrates ⁶ | (15) | 24,200 | 19,000 | NA | NA |
| Refined | (15) | 118,000 | 4,270 | NA | NA |

^pPreliminary. ^rRevised. NA Not available. XX Not applicable.

¹Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

 $^{^2\}mbox{Numbers}$ in parentheses refer to the significant tables where these data are located.

 $^{^3\}mbox{Monthly}$ data and 2004 cumulative data estimated based on 2003 monthly average.

⁴Source: Platts Metals Week.

⁵Source: U.S. Census Bureau.

⁶Copper content.

TABLE 2 $\label{eq:mine_production} \mbox{MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES}^1$

| | Rec | overable coppe | r | | Contained copper | |
|--------------------|----------------------|----------------------|----------------------|------------|---------------------------|----------------------|
| Period | Arizona | Others ² | Total | Electrowon | Concentrates ³ | Total |
| 2004: ^p | | | | | | |
| January - July | 408,000 ^r | 231,000 ^r | 639,000 ^r | 339,000 | 309,000 ^r | 648,000 ^r |
| July | 62,000 | 38,100 | 100,000 | 50,700 | 50,900 | 102,000 |
| August | 62,800 | 36,200 | 99,000 | 49,300 | 51,200 | 100,000 |
| September | 62,800 | 36,400 | 99,200 | 49,800 | 50,800 | 101,000 |
| October | 64,200 | 39,400 | 104,000 | 48,900 | 56,300 | 105,000 |
| November | 61,400 | 46,500 | 108,000 | 47,600 | 62,100 | 110,000 |
| December | 63,300 | 45,200 | 109,000 | 50,000 | 60,300 | 110,000 |
| Year | 723,000 | 435,000 | 1,160,000 | 584,000 | 590,000 | 1,170,000 |
| 2005: | | | | | | |
| January | 58,500 | 39,800 | 98,300 | 42,400 | 57,600 | 99,900 |
| February | 54,200 | 37,500 | 91,700 | 40,800 | 52,400 | 93,100 |
| March | 62,100 | 43,200 | 105,000 | 47,400 | 59,600 | 107,000 |
| April | 62,000 | 39,000 ^r | 101,000 r | 47,700 | 55,000 ^r | 103,000 |
| May | 65,300 | 38,100 ^r | 103,000 ^r | 48,800 | 56,400 ^r | 105,000 |
| June ^r | 61,700 | 36,000 | 97,700 | 48,100 | 51,100 | 99,200 |
| July | 54,400 | 36,000 | 90,400 | 46,600 | 45,000 | 91,600 |
| January - July | 418,000 | 270,000 | 688,000 | 322,000 | 377,000 | 699,000 |

^pPreliminary. ^rRevised.

 $\label{eq:table 3} \textbf{COPPER PRODUCED AT SMELTERS IN}$ THE UNITED STATES, BY SOURCE $^{1,\,2}$

(Metric tons, copper content)

| | Anode |
|--------------------|------------|
| Period | production |
| 2004: ^p | |
| January - July | 301,000 |
| July | 46,500 |
| August | 51,300 |
| September | 48,000 |
| October | 49,200 |
| November | 42,300 |
| December | 49,900 |
| January - December | 542,000 |
| 2005: | |
| January | 42,700 |
| February | 36,100 |
| March | 37,900 |
| April | 49,700 |
| May | 36,900 |
| June | 44,100 |
| July | 40,300 |
| January - July | 288,000 |

Preliminary.

 $^{^{\}mathrm{l}}\mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Includes production from, Idaho, Missouri, Montana, Nevada, New Mexico, and Utah.

³Includes copper content of precipitates and other metal concentrates.

¹Includes blister, anode and copper from primary or secondary sources.

²Data are rounded to no more than three significant digits; may not add to total shown.

 ${\it TABLE~4}$ PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1

| | Pri | mary materials | | | |
|--------------------|----------------------|---------------------|-----------|--------|-----------|
| | Electrolytically | | | | Total |
| Period | refined ² | Electrowon | Total | Scrap | refined |
| 2004: ^p | | | | | |
| January - July | 377,000 | 339,000 | 715,000 | 29,500 | 745,000 |
| July | 49,200 | 50,700 | 99,900 | 4,080 | 104,000 |
| August | 53,400 | 49,300 | 103,000 | 3,870 | 107,000 |
| September | 57,700 | 49,800 | 108,000 | 4,660 | 112,000 |
| October | 57,400 | 48,900 | 106,000 | 4,540 | 111,000 |
| November | 56,700 | 47,600 | 104,000 | 4,190 | 109,000 |
| December | 69,300 | 50,000 | 119,000 | 4,010 | 123,000 |
| Year | 671,000 | 584,000 | 1,260,000 | 50,800 | 1,310,000 |
| 2005: | | | | | |
| January | 54,900 | 42,400 | 97,200 | 4,380 | 102,000 |
| February | 57,400 | 40,800 | 98,100 | 4,380 | 102,000 |
| March | 52,600 | 47,400 | 100,000 | 4,210 | 104,000 |
| April | 53,100 | 47,700 | 101,000 | 4,160 | 105,000 |
| May | 56,100 | 48,800 | 105,000 | 3,750 | 109,000 |
| June | 49,100 ^r | 48,100 ^r | 97,200 | 3,620 | 101,000 |
| July | 54,600 | 46,600 | 101,000 | 3,940 | 105,000 |
| January - July | 378,000 | 322,000 | 699,000 | 28,400 | 728,000 |

^pPreliminary. ^rRevised.

 ${\it TABLE~5}$ COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP 1

(Metric tons, copper content)

| | Refin | eries ² | Ingot m | akers ³ | Brass and wi | re-rod mills | Foundrie | es, etc. ³ | |
|--------------------|-----------|--------------------|--------------------|---------------------|---------------------|--------------|---------------------|-----------------------|----------------------|
| Period | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | Total ⁴ |
| 2004: ^p | | | | | | | | | |
| January - July | 9,350 | 20,100 | 9,750 ^r | 43,800 ^r | 401,000 | 22,500 | 14,400 ^r | 23,600 ^r | 545,000 ^r |
| July | 1,340 | 2,740 | 1,390 | 6,260 | 56,400 | 2,440 | 2,060 | 3,370 | 76,000 |
| August | 1,340 | 2,540 | 1,390 | 6,260 | 56,800 | 2,450 | 2,060 | 3,370 | 76,200 |
| September | 1,340 | 3,320 | 1,390 | 6,260 | 55,200 | 2,690 | 2,060 | 3,370 | 75,600 |
| October | 1,340 | 3,210 | 1,390 | 6,260 | 56,800 | 2,670 | 2,060 | 3,370 | 77,100 |
| November | 1,340 | 2,850 | 1,390 | 6,260 | 50,500 | 2,670 | 2,060 | 3,370 | 70,500 |
| December | 1,340 | 2,680 | 1,390 | 6,260 | 48,000 | 3,300 | 2,060 | 3,370 | 68,400 |
| Year | 16,000 | 34,700 | 16,700 | 75,100 | 669,000 | 36,300 | 24,700 | 40,400 | 913,000 |
| 2005: | | | | | | | | | |
| January | 1,340 | 3,050 | 1,390 | 6,260 | 57,700 | 2,780 | 2,060 | 3,370 | 77,900 |
| February | 1,340 | 3,040 | 1,390 | 6,260 | 54,900 | 3,110 | 2,060 | 3,370 | 75,500 |
| March | 1,340 | 2,870 | 1,390 | 6,260 | 56,300 | 2,980 | 2,060 | 3,370 | 76,500 |
| April | 1,340 | 2,820 | 1,390 | 6,260 | 54,200 | 3,220 | 2,060 | 3,370 | 74,700 |
| May | 1,340 | 2,410 | 1,390 | 6,260 | 54,100 | 2,550 | 2,060 | 3,370 | 73,500 ^r |
| June | 1,340 | 2,280 | 1,390 | 6,260 | 54,500 ^r | 2,380 | 2,060 | 3,370 | 73,600 ^r |
| July | 1,340 | 2,610 | 1,390 | 6,260 | 51,800 | 2,840 | 2,060 | 3,370 | 71,600 |
| January - July | 9,350 | 19,100 | 9,750 | 43,800 | 384,000 | 19,900 | 14,400 | 23,600 | 523,000 |

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²From domestic and foreign source materials.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Electrolytically refined and fire-refined scrap based on source of material at smelter level.

³Monthly data and 2004 cumulative data estimated based on 2003 annual data.

⁴Does not include an estimate, based on reported 2003 data of 3,040 tons per month from new scrap and 1,830 tons per month of copper recovered from scrap other than copper-base.

 ${\bf TABLE~6}$ PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES 1

| | Proc | luction | Ship | ments | Stocks, er | nd of period |
|--------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| Period | Brass mills | Wire-rod mills | Brass mills | Wire-rod mills | Brass mills | Wire-rod mills |
| 2004: ^p | | | | | | |
| January - July | 831,000 ^r | 1,070,000 | 833,000 ^r | 1,070,000 | XX | XX |
| July | 118,000 | 143,000 | 117,000 | 144,000 | 54,100 | 23,900 |
| August | 119,000 | 162,000 | 118,000 | 156,000 | 54,700 | 29,500 |
| September | 113,000 | 154,000 | 113,000 | 148,000 | 54,500 | 35,600 |
| October | 120,000 | 135,000 | 120,000 | 148,000 | 54,400 | 23,000 |
| November | 107,000 | 148,000 | 108,000 | 144,000 | 52,900 | 26,600 |
| December | 100,000 | 134,000 | 97,600 | 130,000 | 55,300 | 31,200 |
| Year | 1,390,000 | 1,800,000 | 1,390,000 | 1,790,000 | XX | XX |
| 2005: | | | | | | |
| January | 113,000 | 141,000 | 114,000 | 137,000 | 55,100 | 35,100 |
| February | 109,000 | 135,000 | 110,000 | 134,000 | 53,300 | 35,100 |
| March | 117,000 | 135,000 | 117,000 | 149,000 | 53,600 | 20,600 |
| April | 109,000 | 143,000 | 112,000 | 141,000 | 50,200 | 22,000 |
| May | 111,000 | 145,000 | 110,000 ^r | 143,000 | 51,400 ° | 23,500 ^r |
| June | 115,000 ^r | 145,000 ^r | 116,000 | 145,000 ^r | 50,300 ^r | 23,100 ^r |
| July | 109,000 | 148,000 | 113,000 | 140,000 | 46,300 | 31,000 |
| January - July | 783,000 | 991,000 | 792,000 | 991,000 | XX | XX |

Preliminary. Revised. XX Not applicable.

 $\label{eq:table 7} \text{CONSUMPTION OF REFINED COPPER}^1$

(Metric tons)

| | Brass | Wire-rod | Other | |
|-----------------------|---------------------|-------------|---------------------|----------------------|
| Period and item | mills | mills | plants ² | Total |
| 2004: ^p | | | | |
| January - July | 346,000 | 1,050,000 ° | 36,100 ^r | 1,440,000 |
| July | 50,900 | 142,000 | 5,160 | 198,000 |
| August | 48,500 | 165,000 | 5,160 | 218,000 |
| September | 46,100 | 151,000 | 5,160 | 202,000 |
| October | 48,200 | 136,000 | 5,160 | 190,000 |
| November | 44,700 | 145,000 | 5,160 | 195,000 |
| December | 39,200 | 129,000 | 5,160 | 173,000 |
| Year | 573,000 | 1,780,000 | 61,900 | 2,410,000 |
| 2005: | | | | |
| January | 44,900 | 145,000 | 5,160 | 195,000 |
| February | 42,500 | 129,000 | 5,160 | 177,000 |
| March | 46,100 | 134,000 | 5,160 | 185,000 |
| April | 41,500 | 143,000 | 5,160 | 190,000 |
| May | 43,000 ^r | 132,000 | 5,160 | 180,000 |
| June | 46,200 r | 141,000 | 5,160 | 192,000 ^r |
| July: | | | | |
| Cathodes | 28,000 | 146,000 | 881 | 175,000 |
| Wire bars | | | (3) | (3) |
| Ingots and ingot bars | 2,050 | | 1,760 | 3,820 |
| Cakes and slabs | (3) | | (3) | (3) |
| Billets and other | 12,300 | W | 2,510 | 14,800 |
| Total | 42,400 | 146,000 | 5,160 | 193,000 |
| January - July | 307,000 | 970,000 | 36,100 | 1,310,000 |

 $^{^{}p}$ Preliminary. r Revised. W Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

 $^{^2}$ Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2003 annual data.

³Withheld to avoid disclosing company proprietary data; included with "Billets and others."

 $\label{eq:table 8} \textbf{U.S.} \ \textbf{APPARENT CONSUMPTION OF COPPER}^1$

| | Refined copper | Copper in | Refined general | Refined | Stock change | Apparent |
|--------------------|----------------|------------------------|----------------------|----------------------|------------------------|----------------------|
| Period | production | old scrap ² | imports ³ | exports ³ | during period | consumption |
| 2004: ^p | | | | | | |
| January - June | 615,000 | 106,000 ^r | 302,000 ^r | 88,200 | (421,000) ^r | 1,360,000 |
| June | 108,000 | 17,400 | 40,400 | 2,720 | (58,900) | 222,000 |
| July | 99,900 | 16,600 | 75,600 | 5,470 | (22,800) | 209,000 |
| August | 103,000 | 16,400 | 65,500 | 9,350 | (33,200) | 208,000 |
| September | 108,000 | 17,400 | 73,800 | 570 | (23,100) | 221,000 |
| October | 106,000 | 17,300 | 60,200 | 3,890 | (12,400) | 192,000 |
| November | 104,000 | 16,900 | 75,300 | 2,460 | (7,870) | 202,000 |
| December | 119,000 | 17,400 | 51,100 | 8,390 | (749) | 180,000 |
| Year | 1,260,000 | 208,000 | 704,000 | 118,000 | (521,000) | 2,570,000 |
| 2005: | | | | | | |
| January | 97,200 | 17,200 | 77,900 | 4,460 | 6,350 | 182,000 |
| February | 98,100 | 17,600 | 66,500 | 3,230 | (7,110) | 186,000 |
| March | 100,000 | 17,300 | 72,000 | 2,830 | (6,550) | 193,000 |
| April | 101,000 | 17,400 | 63,300 | 1,900 | (4,560) ^r | 184,000 |
| May | 105,000 | 16,400 | 101,000 | 7,240 | (12,000) ^r | 227,000 ^r |
| June | 97,200 | 16,100 | 64,100 | 4,270 | (11,700) ^r | 185,000 |
| July | 101,000 | 16,900 | NA | NA | (8,470) | NA |
| January - June | 598,000 | 102,000 | 445,000 | 23,900 | (35,500) | 1,160,000 |

^pPreliminary. ^rRevised. NA Not available.

 ${\bf TABLE~9} \\ {\bf CONSUMPTION~OF~PURCHASED~COPPER-BASE~SCRAP}^{\rm I}$

(Metric tons, gross weight)

| | Sme | lters | | | Brass | and | | | |
|--------------------|-----------|-----------|---------------------|---------------------|----------------------|-----------|-----------|----------------------|----------------------|
| | and ref | ineries | Ingot m | akers ² | | | Foundrie | s, etc. ² | Total scrap |
| Period | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | used |
| 2004: ^p | | | | | | | | | |
| January - July | 9,440 | 20,200 | 13,000 ^r | 63,700 ^r | 505,000 ^r | 23,300 | 25,200 r | 25,900 ^r | 685,000 ^r |
| July | 1,350 | 2,760 | 1,850 | 9,110 | 71,100 | 2,620 | 3,600 | 3,700 | 96,100 |
| August | 1,350 | 2,550 | 1,850 | 9,110 | 72,600 | 2,580 | 3,600 | 3,700 | 97,400 |
| September | 1,350 | 3,290 | 1,850 | 9,110 | 70,300 | 2,820 | 3,600 | 3,700 | 96,000 |
| October | 1,350 | 3,230 | 1,850 | 9,110 | 71,500 | 2,810 | 3,600 | 3,700 | 97,200 |
| November | 1,350 | 2,890 | 1,850 | 9,110 | 63,300 | 2,780 | 3,600 | 3,700 | 88,500 |
| December | 1,350 | 2,700 | 1,850 | 9,110 | 60,300 | 3,440 | 3,600 | 3,700 | 86,000 |
| Year | 16,200 | 34,900 | 22,200 | 109,000 | 843,000 | 37,700 | 43,200 | 44,400 | 1,150,000 |
| 2005: | | | | | | | | | |
| January | 1,350 | 3,080 | 1,850 | 9,110 | 72,400 | 2,910 | 3,600 | 3,700 | 98,000 |
| February | 1,350 | 3,080 | 1,850 | 9,110 | 69,800 | 3,280 | 3,600 | 3,700 | 95,800 |
| March | 1,350 | 2,900 | 1,850 | 9,110 | 71,800 | 3,170 | 3,600 | 3,700 | 97,500 |
| April | 1,350 | 2,850 | 1,850 | 9,110 | 68,400 | 3,370 | 3,600 | 3,700 | 94,200 |
| May | 1,350 | 2,440 | 1,850 | 9,110 | 68,500 | 2,710 | 3,600 | 3,700 | 93,300 |
| June | 1,350 | 2,310 | 1,850 | 9,110 | 70,200 ^r | 2,550 | 3,600 | 3,700 | 94,700 ^r |
| July | 1,350 | 2,640 | 1,850 | 9,110 | 65,100 | 2,980 | 3,600 | 3,700 | 90,300 |
| January - July | 9,440 | 19,300 | 13,000 | 63,700 | 486,000 | 21,000 | 25,200 | 25,900 | 664,000 |

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2003 data.

³Source: U.S. Census Bureau.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

 $^{^2\!}M\!$ onthly data and 2004 cumulative data estimated from 2003 annual data.

³Consumption at brass and wire-rod mills assumed equal to receipts.

 $\label{table 10} {\tt CONSUMPTION\ OF\ PURCHASED\ COPPER-BASE\ SCRAP^{1,\,2}}$

| | 2004 ^p | | | 2 | 2005 | |
|---------------------------------|----------------------|---------|---------------------|---------------------|--------------|----------------|
| Scrap type and processor | January - July | Year | May | June | July | January - July |
| No. 1 wire and heavy: | | | | | | |
| Smelters and refiners | 40,000 ^r | 68,500 | 5,710 | 5,710 | 5,710 | 40,000 |
| Brass and wire-rod mills | 239,000 | 394,000 | 30,700 ^r | 28,900 ° | 30,800 | 219,000 |
| No. 2 mixed heavy and light: | | | | | | |
| Smelters and refiners | 15,500 | 26,800 | 1,770 | 1,630 | 1,960 | 14,600 |
| Brass and wire-rod mills | 4,250 | 6,250 | 487 | 407 | 458 | 3,230 |
| Total unalloyed scrap: | | | | | | |
| Smelters and refiners | 55,500 ^r | 95,300 | 7,480 | 7,340 | 7,670 | 54,500 |
| Brass and wire-rod mills | 243,000 | 401,000 | 31,200 ^r | 29,300 ^r | 31,300 | 223,000 |
| Red brass: ³ | | | | | | |
| All plants | 23,200 ^r | 39,300 | 3,070 | 3,180 | 3,050 | 22,000 |
| Leaded yellow brass: | | | | | | |
| All plants | 192,000 ^r | 322,000 | 16,200 | 16,900 | 14,300 | 111,000 |
| Yellow and low brass: | | | | | | |
| All plants | 24,200 ^r | 41,300 | 13,800 | 15,900 | 13,000 | 103,000 |
| Cartridge cases and brass: | | | | | | |
| All plants | 20,200 ^r | 86,600 | 7,960 | 8,350 | 7,370 | 55,500 |
| Auto radiators: | | | | | | |
| Smelters and refiners | 15,600 ^r | 26,700 | 2,230 | 2,230 | 2,230 | 15,600 |
| Bronzes: | | | | | | |
| Smelters and refiners | 4,900 ^r | 8,390 | 699 | 699 | 699 | 4,890 |
| Brass mills | 3,830 | 6,350 | 508 | 479 | 473 | 3,260 |
| Nickel-copper alloys: | | | | | | |
| All plants | 12,200 ^r | 20,000 | 1,690 | 1,700 | 1,590 | 11,300 |
| Low grade and residues: | | | | | | |
| Smelters and refiners | 7,350 ^r | 12,600 | 1,050 | 1,050 | 1,050 | 7,350 |
| Other alloy scrap: ⁴ | | | | | | |
| Smelters and refiners | 642 ^r | 1,100 | 92 | 92 | 92 | 644 |
| Brass mills | 3,050 | 4,860 | 359 | 332 | 332 | 2,670 |
| Total alloyed scrap: | | | | | | |
| Smelters and refiners | 51,900 ^r | 89,100 | 7,420 | 7,420 | 7,420 | 51,900 |
| Brass mills | 285,000 | 480,000 | 40,100 | 43,400 | 36,800 | 285,000 |
| Total scrap: | | | · | · | | |
| Smelters and refiners | 107,000 ^r | 184,000 | 14,900 | 14,800 | 15,100 | 106,000 |
| Brass and wire-rod mills | 528,000 | 880,000 | 71,300 ^r | 72,800 ^r | 68,000 | 507,000 |

^pPreliminary. ^rRevised.

¹Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,300 tons of scrap per month based on 2003 annual data; monthly data include estimates of about 11,000 tons of scrap per month consumed by ingot makers.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

 $^{^4\}mathrm{Includes}$ refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

TABLE 11 COPPER STOCKS AT END OF PERIOD 1

| | | | | Re | Refined copper | | | | |
|--------------------|---------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|---------|---------|--|
| | Crude | | Wire-rod | | | | | Total | |
| Period | copper ² | Refineries ³ | $mills^3$ | Brass mills ³ | Other ⁴ | Comex ⁵ | LME^6 | refined | |
| 2004: ^p | | | | | | | | | |
| July | 62,200 | 6,780 | 29,700 | 19,100 | 4,870 | 71,700 | 80,800 | 213,000 | |
| August | 65,700 | 8,640 | 21,400 | 22,600 | 4,870 | 55,900 | 66,400 | 180,000 | |
| September | 71,600 | 7,830 | 15,200 | 24,900 | 4,870 | 44,900 | 59,000 | 157,000 | |
| October | 72,200 | 9,210 | 25,200 | 20,300 | 4,870 | 41,300 | 43,400 | 144,000 | |
| November | 70,600 | 13,100 | 24,300 | 18,200 | 4,870 | 38,500 | 37,500 | 136,000 | |
| December | 51,400 | 10,300 | 20,300 | 21,500 | 4,870 | 43,700 | 35,000 | 136,000 | |
| 2005: | | | | | | | | | |
| January | 66,100 | 12,300 | 24,300 | 24,100 | 4,870 | 41,600 | 34,900 | 142,000 | |
| February | 46,700 | 10,600 | 20,800 | 22,300 | 4,870 | 42,500 | 33,900 | 135,000 | |
| March | 42,300 | 6,820 ^r | 25,000 | 20,900 | 4,870 | 39,300 | 31,500 | 128,000 | |
| April | 42,500 | 8,200 ^r | 31,100 | 20,300 | 4,870 | 27,300 | 32,100 | 124,000 | |
| May | 38,200 | 9,680 ^r | 29,600 ^r | 19,300 | 4,870 | 20,200 | 28,200 | 112,000 | |
| June | 45,200 ^r | 5,810 ^r | 32,600 ^r | 20,600 r | 4,870 | 13,900 | 22,400 | 100,000 | |
| July | 36,000 | 7,740 | 29,800 | 21,100 | 4,870 | 9,970 | 18,200 | 91,700 | |

^pPreliminary. ^rRevised.

TABLE 12 AVERAGE PRICE OF COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

| | U.S. producers | Comex | LME |
|----------------|-----------------|-----------------------|------------|
| | delivered price | first | cash price |
| Period | cathode1 | position ² | Grade A |
| 2004: | | | |
| July | 132.078 | 126.812 | 127.342 |
| August | 133.015 | 127.752 | 129.064 |
| September | 136.680 | 131.414 | 131.283 |
| October | 140.273 | 135.007 | 136.575 |
| November | 146.599 | 141.333 | 141.620 |
| December | 150.897 | 145.631 | 142.633 |
| Year | 133.938 | 128.972 | 129.958 |
| 2005: | | | |
| January | 150.261 | 144.995 | 143.751 |
| February | 151.905 | 146.639 | 147.544 |
| March | 153.946 | 148.680 | 153.268 |
| April | 154.606 | 149.340 | 153.938 |
| May | 153.256 | 147.990 | 147.331 |
| June | 167.452 | 162.186 | 159.807 |
| July | 168.484 | 163.218 | 163.909 |
| January - July | 157.130 | 151.864 | 152.793 |
| | | | |

¹Listed as "U.S. producer cathode."

Sources: Platts Metals Week and American Metal Market.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Copper content of blister and other materials in transit and in process of refining.

³Stocks of refined copper as reported; no estimates are made for nonrespondents.

⁴Monthly estimates based on reported and 2003 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

⁵Commodity Exchange Inc., New York.

⁶London Metal Exchange Ltd., U.S. warehouses.

²Listed as "Comex high grade first position."

 ${\it TABLE~13}$ NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

| | | | Dealers (| New York) |
|----------------|-------------|-------------|-----------|---------------------------|
| | Brass mills | Refiners | No. 2 | Red brass turnings and |
| Month | No. 1 scrap | No. 2 scrap | Scrap | borings |
| 2004: | * | • | • | |
| July | 125.52 | 101.33 | 89.00 | 55.00 |
| August | 126.64 | 101.73 | 89.00 | 55.00 |
| September | 127.29 | 106.19 | 89.00 | 55.00 |
| October | 130.43 | 113.38 | 89.00 | 55.00 |
| November | 135.40 | 118.15 | 89.00 | 55.00 |
| December | 139.14 | 121.00 | 89.00 | 55.00 |
| Year | 126.41 | 107.62 | 86.86 | 55.14 |
| 2005: | | | | |
| January | 139.40 | 119.50 | 89.00 | 55.00 |
| February | 139.89 | 121.67 | 89.00 | 55.00 |
| March | 142.52 | 123.43 | 89.00 | 55.00 |
| April | 143.52 | 126.00 | 89.00 | 55.00 |
| May | 138.24 | 124.76 | 89.00 | 55.00 |
| June | 137.23 | 124.82 | 93.09 | 59.09 |
| July | 153.40 | 141.60 | 99.00 | 65.00 |
| January - July | 142.03 | 125.97 | 91.01 | 57.01 |

Source: American Metal Market.

 ${\it TABLE~14}$ U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1

(Metric tons, copper content)

| | Ore and concentrate | | | Matte, a | Matte, ash and precipitates | | | Blister and anodes | | | efined | |
|------------|---------------------|------|-----------|----------|-----------------------------|------|-----------------|--------------------|--------|--------------------|-----------|---------|
| | | 200 | 05 | | 2005 January - | | | 200 | 5 | | 200 |)5 |
| Country or | | | January - | | | | • | January - | | _ | January - | |
| territory | 2004 | June | June | 2004 | June | June | 2004 | June | June | 2004 | June | June |
| Brazil | | | | | | | | | 10 | 15,600 | 3,000 | 12,000 |
| Canada | 516 | 2 | 2 | 99 | 29 | 69 | 75,500 | 7,960 | 43,200 | 278,000 | 28,000 | 155,000 |
| Chile | | | | | | | 48,900 | 3,560 | 20,100 | 311,000 | 16,700 | 175,000 |
| Germany | | | | | | 38 | | | | 21,000 | 1,810 | 14,100 |
| Japan | | | | (2) | | | 19 | | (2) | 4,380 | 684 | 2,780 |
| Mexico | 22,400 | | 204 | 206 | | 37 | 8,630 | 953 | 3,490 | 19,300 | 3,010 | 27,000 |
| Namibia | | | | | | | 7,710 | | | | | |
| Peru | | | | | | | 10,200 | | | 152,000 | 11,200 | 73,600 |
| Taiwan | | | | 1,330 | 90 | 613 | | | | (2) | | |
| Other | | | | 45 | | 97 | 16 ^r | | | 6,120 ^r | 371 | 2,980 |
| Total | 22,900 | 2 | 206 | 1,680 | 119 | 854 | 151,000 | 12,500 | 66,700 | 807,000 | 64,700 | 463,000 |

Revised. -- Zero.

Source: U.S. Census Bureau.

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¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than 1/2 unit.

 $\label{eq:table 15} \text{U.s. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS}^1$

(Metric tons, copper content)

| | Ore and concentrate | | | Matte, ash | and precipit | ates | Blist | er and anode | S | I | Refined | | |
|----------------------|---------------------|-------------------|--------|------------------|-------------------|--------|--------------------|-------------------|--------|--------------------|-------------------|--------|--|
| | | 2005 January - | | | 2005 January - | | - | 2005 January - | | | 2005 January - | | |
| Country or | - | | | • | | | | | | | | | |
| territory | 2004 | June | June | 2004 | June | June | 2004 | June | June | 2004 | June | June | |
| Belgium | 6 | | 39 | 45 | | 37 | 1,320 | | 675 | 998 | | 49 | |
| Canada | 18,200 | 1,390 | 8,540 | 18,800 | 1,320 | 10,300 | 22,400 | 1,200 | 10,800 | 2,230 | 150 | 1,350 | |
| China | 2,340 | 11,900 | 32,300 | 52 | 1,180 | 3,960 | 307 | | 181 | 23,900 | 2,690 | 12,400 | |
| Costa Rica | | | 3 | | | | | | | 1,300 | | 1 | |
| Germany | 32 | | | 23 | (2) | 15 | 1,880 | 40 | 489 | 70 | | 133 | |
| Hong Kong | 229 | | 2 | 12 | | 1 | 3,410 | 246 | 1,580 | 11 | | | |
| India | 56 | | 149 | 21 | | 1 | 164 | 14 | 41 | 2,940 | 840 | 4,250 | |
| Italy | | | | | | 18 | 1,570 | 357 | 2,030 | 21,100 | | 14 | |
| Japan | 2,510 | 5,740 | 10,400 | 122 | | 68 | 705 | 195 | 1,190 | 66 | | 5 | |
| Korea, Republic of | 23 | | 1 | 8 | | | 8,910 | 35 | 238 | 5,060 | 8 | 83 | |
| Mexico | 115 | | 6,380 | 2,650 | 7 | 419 | 221 | 202 | 381 | 20,500 | 9 | 4,830 | |
| Saudi Arabia | | | | | | | | | 11 | 7,840 | | | |
| Singapore | | | 19 | 19 | 5 | 15 | 654 | 40 | 289 | 39 | | 13 | |
| Spain | 308 | | 1,570 | | | | 347 | 20 | 100 | | | | |
| Sweden | | | | | | | 399 | | 1,040 | 3 | | | |
| Taiwan | 109 | | | 5 | 1 | 1 | 1,320 | 78 | 857 | 29,000 | | 55 | |
| United Arab Emirates | 5 | | | 5 | | | 669 | 3 | 67 | | 3 | 4 | |
| United Kingdom | 37 | | 21 | 87 | | 33 | 474 | 20 | 124 | 590 | 27 | 71 | |
| Other | 269 ^r | 32 | 108 | 244 ^r | 4 | 53 | 1,680 ^r | 90 | 304 | 2,610 ^r | 550 | 705 | |
| Total | 24,200 | 19,000 | 59,500 | 22,100 | 2,520 | 14,900 | 46,400 | 2,540 | 20,400 | 118,000 | 4,270 | 23,900 | |

Revised. -- Zero.

Source: U.S. Census Bureau.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than 1/2 unit.

 $\label{eq:table 16} \text{U.S. COPPER SCRAP IMPORTS}^1$

| | | Unalloyed | | Alloyed | | | | |
|--------------------|--------|-----------|----------|---------|-------|----------|--|--|
| | | 20 | 05 | | 2005 | | | |
| Country or | | | January- | • | | January- | | |
| territory | 2004 | June | June | 2004 | June | June | | |
| Canada | 6,370 | 484 | 3,280 | 44,500 | 3,660 | 22,800 | | |
| China | 1 | | | 448 | 23 | 52 | | |
| Costa Rica | 1,400 | 191 | 927 | 516 | 47 | 183 | | |
| Dominican Republic | 446 | | 69 | 432 | | 223 | | |
| Germany | 48 | 26 | 32 | 1,130 | (2) | (2) | | |
| Guatemala | 271 | | 37 | 1,050 | 143 | 714 | | |
| Honduras | 1,430 | 121 | 916 | 625 | 42 | 274 | | |
| Jamaica | 429 | 23 | 140 | 182 | 10 | 57 | | |
| Japan | 65 | 3 | 20 | 145 | | 82 | | |
| Mexico | 10,300 | 1,360 | 5,460 | 22,100 | 2,310 | 12,100 | | |
| Taiwan | | | | 1,480 | | 75 | | |
| United Kingdom | 554 | 20 | 140 | 1,030 | 99 | 361 | | |
| Other | 2,130 | 165 | 968 | 4,630 | 503 | 3,860 | | |
| Total | 23,400 | 2,390 | 12,000 | 78,300 | 6,830 | 40,900 | | |

⁻⁻ Zero.

Source: U.S. Census Bureau.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Less than 1/2 unit.

TABLE 17
U.S. COPPER SCRAP EXPORTS¹

| | | | U | Inalloyed | Alloyed | | | | | | | |
|--------------------|---------|-------|----------|-----------|----------|--------|----------|---------|------------|--------|--------------|--------|
| | | | | 2005 | | | | 2005 | | | | |
| | | No. 1 | | No. 2 | | Other | | | Segregated | | Unsegregated | |
| Country or | | | January- | | January- | | January- | | January- | | January- | |
| territory | 2004 | June | June | June | June | June | June | 2004 | June | June | June | June |
| Belgium | 3,850 | | | | | 98 | 361 | 8,200 | 64 | 725 | 400 | 2,610 |
| Canada | 33,300 | | | | | 2,230 | 13,500 | 15,000 | 280 | 1,780 | 984 | 4,490 |
| China | 222,000 | 8,490 | 40,900 | 9,600 | 56,900 | 7,060 | 29,500 | 239,000 | 8,240 | 51,000 | 5,490 | 33,600 |
| Germany | 8,830 | 40 | 444 | | | 592 | 4,820 | 13,800 | 106 | 1,170 | 457 | 4,130 |
| Hong Kong | 3,910 | 273 | 2,300 | 317 | 1,240 | 40 | 352 | 11,000 | 328 | 2,290 | 597 | 4,400 |
| India | 4,160 | 17 | 282 | 20 | 240 | 353 | 2,090 | 45,100 | 1,020 | 8,930 | 19 | 724 |
| Japan | 7,930 | | | 9 | 626 | 367 | 3,050 | 9,660 | 316 | 2,900 | 173 | 1,190 |
| Korea, Republic of | 22,400 | 470 | 3,210 | 824 | 5,710 | 664 | 5,430 | 16,300 | 749 | 6,000 | | 1,500 |
| Mexico | 4,560 | | | | 200 | 19 | 195 | 1,570 | 116 | 271 | 14 | 157 |
| Spain | 37 | | | 20 | 138 | | | 2,740 | 100 | 228 | 116 | 1,020 |
| Taiwan | 11,300 | 205 | 615 | 588 | 3,570 | 562 | 1,960 | 13,700 | 498 | 3,750 | 209 | 781 |
| Thailand | | | | | | 162 | 441 | 1,250 | 19 | 312 | | |
| United Kingdom | 34 | | | | | 19 | 107 | 4,560 | 20 | 99 | 190 | 1,830 |
| Other | 2,990 | 19 | 324 | | | | | 7,210 | 185 | 3,860 | 257 | 811 |
| Total | 325,000 | 9,510 | 48,100 | 11,400 | 68,600 | 12,200 | 61,800 | 389,000 | 12,000 | 83,300 | 8,900 | 57,200 |

⁻⁻ Zero.

Source: U.S. Census Bureau.

 $^{^{1}\}mbox{Data}$ are rounded to no more than three significant digits; may not add to totals shown.